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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/548,727	04/13/2000	Johan C. Talstra	PHN-17.410	7176

24737 7590 06/30/2006

PHILIPS INTELLECTUAL PROPERTY & STANDARDS
P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510

EXAMINER	
BOCCIO, VINCENT F	

ART UNIT	PAPER NUMBER
2621	

DATE MAILED: 06/30/2006

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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/548,727
Filing Date: April 13, 2000
Appellant(s): TALSTRA ET AL.

James D. Leimbach # 34,374
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 4/7/2006 appealing from the Office action mailed 11/30/2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(5) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5915027	Cox et al.	6/1999
WO 99/11064	Linnartz	3/1999

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

   A person shall be entitled to a patent unless --

   (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 7, 8, 12-16 and 19-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Linnartz et al. (PCT WO 99/11064).

Regarding claim 7, Linnartz discloses and meets the limitations associated with a method of exchanging copy protection information regarding an information carrying medium between a reading and application device (Figs. 5 and/or Fig. 6), the method comprising:

- wherein the copy protection information comprises a first characteristic (page top 11-12/13-14 bottom, "encoder pre-computers several Hash values over the MPEG content"), of the {MEG video} content of

information transmitted from the reading device (52) ***of the content*** of the information transmitted from the reading device (transmit MPEG video, which Hash values were generated at the MPEG encoder); and

- a second characteristic of the content of information received by the application device after the transmission by the reading device (met by the decoder which computes hash values, page 12/14);
- after computing the characteristics being received by the reading device ("MPEG decoder returns the watermark W, plus the …. Hash value hi and signs the message");
- wherein the characteristics are verified comparing, wherein the result is used to stop the transmission, playback and/or recording of information in case of a mismatch of the characteristics ("The drives then compares decoded versions of si with ci"), wherein as understood upon a difference according to Fig. 5, would cause switch 54 to open and stop transmission, if the same, the transmission between the reading and application device, would continue, thereby effecting copy protection of the recorded material between a reading and application device.

Regarding claim 8, Linnartz discloses and meets the limitations associated with a method and corresponding apparatus for exchanging copy protected information having copy protection information on

- an information carrying medium (Fig. 5, "51"), from a reading device (Fig. 5, "52");
- application device (w/decoder 57);
- wherein the reading device comprises means for determining a first characteristic (unit 52, checks a first characteristic watermark, against corresponding characteristic or supplemental information such as a physical or control signals {another watermark}, with the watermark received thru path 56, Abstract etc.);
- wherein the application device comprises means for determining the copy protected information comprises a first characteristic (video data with "watermarked content") of the content of information transmitted from the reading device; and

- wherein the characteristics are verified by comparison and wherein the result of the comparison is used to stop the transmission, playback and/or recording of information in case of a mismatch of the characteristics.

Regarding claims 12-13, Linnartz discloses and meets the limitations associated with a method and corresponding apparatus the method comprising:

- receiving information from a first source being a reading device (Fig. 5 reading from the disk "51 & 52");
- transmitting the information (from disk 51, thru switch and line/wire 54-55 to decoder 57);
- receiving a characteristic (abstract, watermark from disk), from a second source
- which is a playing and/or recording device (interpreted as one of therefore, met by the decoder 57 & display 58, and meets the limitation of a playing device), wherein the decoder 57, extract the watermark and from the signal of 51, sends back to 52, wherein the second source is different and met by the decoder 57 {decoder 57 -vs.- disk 51}, being a source of a extracted watermark;
- determining (unit 53 of 52 of the source), whether the characteristic is derived from the contents of the information that was transmitted (met by wherein the watermark is checked against further supplemental information, such as "a physical mark on the carrier, against the extracted watermark from the decoder, thereby the determination is made by unit 52 with element 53, performing the comparison, also see page 11, line 16 to page 14 etc……., controlling the switch 54 of unit 52 or the reading device, based on check or comparison step.

Regarding claims 14-16, Linnartz discloses and meets the limitations associated with a method and corresponding apparatus the method comprising:

- deriving a first characteristic (by an encoder, Pages 11-12 etc..... calculate or derive, a Hash value or hash values);
- from a first portion (MPEG content, transmitted w/ watermark);
- a first information signal (MPEG);
- by a first apparatus (such as Figs. 5-6, player "52", met by page 14, "MPEG encoder pre-computes several hash values over the MPEG content", "MPEG content plus the set of hash values are stored in the disc in encrypted form");
- transmitting, the first portion (the MPEG content or stream from which one of the hash values was derived, successive MPEG stream of content to the decoder 57, etc..... with respect to Fig. 6, pages 12-13, to the receiving unit met by the MPEG decoder 57 receiving side/unit for example);
- receiving the first portion transmitted, now referred to as "a second portion" (received first portion or the MPEG content from which the first characteristic was derived by the encoder);
- wherein a second portion (is received, which is the first portion, transmitted, now referred to as a second portion of a second information signal, after the transmission of the first);
- thereafter transmitting the first, now received called the second, deriving a second characteristic (Hash value & watermark & signature), from the received second portion (which is referred to as the first, when received referred to as the second therefore, {first = second});
- transmitting the second derived characteristic back to the player (Fig. 5, such as 56), receiving and comparing by {53}, wherein the transmitting from the player 52 to the decoder 57, is controlled by and depends upon the first and second derived characteristic signals controlling transmitting by switch 54, thereby copy protection of content is accomplished.

Regarding claims 17-18, Linnartz in Fig. 5, further discloses and meets the limitations as recited, a transmitter comprising:

- a first receiver (head) for receiving a first source (read head of unit 52);
- a transmitter (head to 53) for transmitting the information to;
- a second receiver (53, {which is an input for an electric signal}), for receiving a characteristic from a second source (57, thru 56 to 53),
- the second source (MPEG decoder 57), being separate from the transmitter and different than the first source; and
- processing means for determining whether the characteristic is derived from the transmitted portion of the information (either watermark and/or hash values, as analyzed and discussed with respect to the claims above), wherein depending upon a determination, terminating transmission at the switch 54, based on the comparison.

Claims 19-21 are analyzed and discussed with respect to the claims above.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the

examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-4, 6 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Linnartz (WO 99/11064) in view of Cox et al. (US 5,915,027).

Regarding claim 10 Linnartz in Fig. 5, discloses and meets the limitations as recited,

- an application device (57), for receiving information from
- a reading device for playback and/or recording comprising:
- an application reporting unit (57) for reporting to the reading device (52);
- a characteristic (watermark/hash, see 102 above) of the content of the information received by the application reporting unit (57) and a verifying unit (53) for receiving characteristics (from disk 51 and from decoder 57 thru 56 to 53), of the content of the information transmitted from the reading device to the application device (when received the signal is processed to locate the return a watermark), reported the application report unit and for verifying the characteristic by comparison (by 53, controlling switch 54).

Further regarding claims 10-11, Linnartz fails to particularly support the claim language as recited:

o wherein the application unit continuously reporting to the reading device a characteristic of the content received, but, merely seems to suggest a one shot, return of a watermark, hash and/or signature, possible in encrypted form (Fig.6)

Cox teaches watermarking video by (col. 2, lines 46-49 for example), providing watermarks every N th frame or to provide periodic watermarking thru-out the video, further content owners wish to protect each and every frame, as taught by Cox.
Therefore, it is known to provide periodic watermarking of material, even as suggested to watermark each frame, therefore,

it would have been obvious to one skilled in the art to watermark periodically or even every frame, as taught by Cox which content owners would prefer, which would provide higher levels of protection to content owners.

Therefore, upon having periodic or every frame watermarked, upon a system that the decoder detects and reports back, the decoder in effect would be continuously sending watermarks removed continuously reported back to the verifying unit verifies the continuous characteristic received continuously, as is considered to be obvious to one skilled in the art.

After a careful consideration the examiner further rejects claims 1-4, 6 and 9 and 11, in view of claim 10, wherein continues reporting is obvious in view of having watermarks per image, further, watermark detection takes place in the external MPEG decoder, the information about the presence of the watermark and possible the supplemental information carried by the watermark is transferred back to the drive via link 56, wherein one an embodiment the ***drive 52 electronically signs the content and "the MPEG decoder 57 returns a watermark and appropriate signatures",*** therefore, the drive 52 receives the returned derived watermarks of the received content from the decoder, wherein the drive checks the ticket for content with that watermark, since signatures and watermarks are returned therefore, a summaries are generated or more than one piece of data, watermark and signatures {or at least three}, therefore, a summary, which are characteristics, wherein this information is secret, further according to the abstract the physical as well as the control signal being the electronic version can be used, claim 6.

Allowable Subject Matter

Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 5, the prior art discloses optical discs having sectors and MPEG, but, the prior art fails to teach, disclose or fairly suggest, the combination as claimed,

O storing in a plurality of sectors in MPEG format on a optical carrier, and the selection of sectors of information to be summarized is based on the values of the SCR field of the sectors.

(10) Response to Argument

(A) In re appellant states on page 11, with respect to Linnartz 102 rejection of claims 7-8 and 12-21,

"Note that the content that is compared against the retrieved watermark is not disclosed or suggest as **being derived from the content** that is transmitted from the playback to the receiving device.".

In response the examiner has previously stated, the definition of the recited word, derived is given it broadest reasonable interpretation, such as:

"to take or receive" or

"from a specified source" or

"to, deduce", standard Webster Dictionary.

IEEE Standard dictionary, derived data is defined as,

"Data that is computed or otherwise obtained from other data by application of ***a specified procedure***".

Therefore, the examiner believes, the word "derived", should be interpreted based in the known scope of the word rather than specifics of applicants specification, which the claim language only reflects.

Therefore, based on above the examiner deems that the wording derived, watermarks are met by the physical watermark,

which can be said to be, derived from for example a physical watermark on the record carrier, which would be processed by a specific procedure, such as:

- imaging the watermark, and
- converting to a signal, to be compared at the comparator 53, with the watermark returned from the MPEG decoder (see abstract and Fig. 5).

The watermark from the decoder (57) is also derived and returned on path 56, originated from the source transmitting the playback signal from disk/disc 51.

The content met by the disc/disk 51 with data and physical mark, playback from source/player 52 though transmission line 55, to decoder 57, deriving the watermark, wherein the watermark is transmitted back on line 56, or retuned, to 52, to be compared, at comparator 53, controlling the switch 54, stopping the transmission on line 55 with switch 54, based on the comparison result (see abstract).

Further it is noted that the MPEG decoder, can be said to derive, the watermark, which can be a pixel domain watermark.

See, page 9, "An embodiment of the system concept combines various watermarking methods. … pixel domain watermarks are present … only detectable on MPEG decoders and encoders", or are derivable, by MPEG encoders and decoders.

In addition, page 12, describes where the MPEG decoder uses hash values which are randomly picked and selecting one of the hash functions the drive passes the MPEG but, not the hash the drive informs the MPEG decoder about which hash ***to compute,*** the MPEG decoder returns the watermark W, plus the appropriate hash value and signs this message or a characteristic or summary of information to the drive, to compare with associated data, such as a watermark and hash values and even checking the signature, or why would one return values/data, without comparison in this environment, being copy protection of content.

All arguments associated with the claim language, deriving or derived, are not persuasive because the claim language has been given a reasonable read, based on the claim language used, the specification, based on the claims, has not been imported into the claims.

(B) In re page 12, appellant states, "Linnartz teaches that is cryptically unfeasible to compute the seed from the physical mark (see page 5, lines 33-34).

In response the examiner does not find relevance with respect to page 5, the passage lines 18-34, which states,

"During mastering of the RO disc, the bit content of the physical mark is generated from the seed information provided by (and only known to) the content owner.", and

"For a small scale pirate who wants to order a publishing house to press a certain quantity of discs, it is technically difficult to find the bit value of the physical marker. Moreover, he would have to provide the publishing house with the seed, instead of the physical marker itself. It is cryptically unfeasible to compute the seed from the physical mark."

Therefore, physical marks are generated with provided seeds, while generating seeds from physical marks is un-feasible.

(C) In re page 12, appellant states,

"It should be noted that the watermark is compared with a ticket and that there is no disclosure or suggestion for the ticket to be transmitted from the drive to the decoder 57.", and

"There is no disclosure or suggestion that the verification data that is used by the drive 52 to check against the returned by the decoder 57 is derived from the content transmitted to the decoder 57."

In response the examiner cites the abstract, "comparing watermark information via a link to the playback device. The playback device checks the watermark information against further supplemental information, such as a physical mark on the record carrier or the control signal."

Therefore, the player derives a watermark from the carrier and compares with the returned watermark from the decoder from the transmitted content, as is clear.

Since the content is the carrier having the physical as well as the watermark, with respect to the content (51), the player derives the physical watermark with respect to the content and the decoder returns the content watermark with respect to the content to be compared, therefore the argument are not deemed persuasive.

Further even the ticket is compared with the watermark, therefore, both signals are transmitted to the comparator for comparison.

Appealed Claims 7, 8 and 12

(D) In re pages 13-14, appellant states, "The characteristics of the information is used interchangeable with a summary of the information,"

In response the examiner does not find any claim language including the wording summary or summaries in claims 7-8, therefore, the arguments are not deemed persuasive.

Claims 7-8, recites first and second characteristics met by derived physical mark and derived watermark information by the MPEG decoder 57, the marks or information is compared at 53 to control the switch to stop transmission (see abstract).

(E) In re page 15, appellant states, "The rejection does not address "deriving" as used within the present invention.

In response the examiner states, the scope of the claims is assessed with respect to the claim language used, the specification is not in the claims.

(F) In re page 16, appellant states,

"There is no disclosure or suggestion within Linnartz deriving first and second characteristics from the content contained on the information carrying medium and comparing the first and second characteristics for a match.", and

"the physical mark within Linnartz is not transmitted by the reader."

In response the physical and well as the content watermark information, are derived (in view of being a broad term), further all data sent on any wire can be said to be transmitted.

A better question would be in Linnartz, where is there not a transmission, rather than where is there a transmission.

If somehow applicant can state and claim with respect to Fig. 3 for example that element 30 transmits back to 20 on line 305, the examiner cannot understand why the MPEG decoder 57 in Fig. 5, line 56 or MPEG Decoder 68 in Fig. 6, transmission line 64, sending a signal back to the player, somehow is not transmitted!!

All arguments with respect to claims 7-8 are not deemed persuasive and any further argument with respect to claim language used with respect to, derive, derived, deriving and transmit or transmitting, is deemed to be addressed and is deemed to require no more disclosure or discussion by the primary examiner of record.

Claims 12-13 are analyzed and discussed with respect to the claims and issues above and is deemed to require no more discussion by the examiner.

Appealed Claim 14 & 16-21

(G) In re appellant states, "Linnartz does not disclose or suggest first and second characteristics that are derived from portions contained in the medium".

In response the examiner cites, in accord to page 11 of Linnartz, lines 20-33,

"the drives hashes, adds a random number and signs the MPEG stream using well known cryptographic algorithms like RSA or DSA. The MPEG decoder then verifies the signature, detects the watermark and send a message back to the drive (page 11, lines 21-23)", and

"The compliant MPEG encoder already pre-computes a set of values, which it provides to the recorder and the drive.",

therefore, hashes are computed, therefore, derived (page 11, lines 31-32).

The hashes can be or are, derived from the content the content is also transmitted to the MPEG decoder, which derives information such as, "The message contains the retrieved watermark bits concatenated to the random number and the signature as it was placed by the drive, the MPEG decoder signs this message again."

As can be seen the MPEG decoder sends a message, containing the retrieved watermark (derived and transmitted), random number, signature as it was placed by the drive and the MPEG decoder signs this message again, this reads on sending a summary of information back to the player, met by a subset of what was received in the transmitted signal to the MPEG decoder.

Claims 16-21 are analyzed and discussed with respect to the claims above.

Appealed claim 1

(H) In re pages 23-24, appellant states, "Accordingly, the rejection is treated as an obviousness rejection based on Linnartz for the simple reason that Cox is included by name only and no reference is made to Cox by ***any*** of the office actions *that **proceeded** this appeal.*"

The examiner directs attention to office action dated (9/22/04, pages 7-8, non-final, where Cox was first introduced in a detailed analysis of claim 10, next action non-final (6/16/05, pages 4-5, last action against claim 10 was incorporated by reference and included additional claims 1-4, 6, 9 and 11, in addition to claim 10).

Since appellant infers all action are void of what Cox teaches, is a mischaracterization with respect to all the examiner actions, set forth by the examiner in this application.

All actions of record are deemed relevant in this case.

In view of not acknowledging Cox being used, all argument are not in light of the combination made, at no fault of the examiner, the arguments are not persuasive for not addressing the 103 rejection set previously set forth.

It is further noted the last arguments presented by applicant dated 1/11/06, this statement above with respect to Cox, as not stated and is a new argument in this case.

(I) In re page 25, appellant states, "The signatures within Linnartz are not characteristics of the content of information that is contained on the information carrying medium.".

In response the examiner deems that the claim language used does not support the argument.

Such as claim 1, "the content of the information transmitted from the reading device", wherein the reading devices reads on the unit 52, in this case.

Further as recited in claim 3, recites "summaries of selected parts of the transmitted and the received information are used as characteristics", referring to the transmitted and received information, does not claim that all information in the transmitted and received signals, all originated from the medium or disk/disc 51, therefore not deemed persuasive.

In addition, summary is a subset of information sent or transmitted an information signal 55, from the reading device or unit 52, wherein the content does have a watermark, which originates from the medium and a hash value which is also from the content signal (page 12, lines 1-17, "The MPEG decoder returns the watermark W, plus the appropriate hash value hi"), therefore, the summary is selected parts derived from the signal to the MPEG decoder the summary is met by two values derived from the content signal from the medium, therefore, the summary of selected parts is met.

Appealed claims 2-3

(J) In re page 25, appellant states, "no disclosure or suggestion within Linnartz or Cox, either alone or in

combination for summaries of the transmitted and received information to be used for characteristics."

In response claims 2-3, is a 103 rejection with Cox, having watermarks (Cox, every N frames, see Cox rejection 103), since every N frames, renders obvious to generate transmission summaries of a watermark, or sending continuously, watermarks or sending continuously summaries, met by transmitting watermarks continuously, or a subset of the transmitted and received data at the MPEG decoder, transmitted back to 52, see Fig. 5.

Appealed Claim 4

(K) In re page 26, appellant states, "no disclosure or suggestion in Linnartz or Cox for the selection of parts of information to be summarized is based on a secret shared between the reading device and the application device."

In response the secret is deemed met by the watermark and a secure link (Fig. 6), also the Hash values are also deemed to be a secret, known only to player and decoder, wherein the player or MPEG encoder pre-computes several hash values computed in a slightly different manner and are store in encrypted form. The drive informs the MPEG decoder about which hash to compute (secret between) and the MPEG decoder returns the watermark and hash values and signs the message (page 12).

Appealed claim 9

(L) In re page 26, "The appellants respectfully point out that the physical mark … is not transmitted by the reader."

In response the examiner fails to agree, the physical watermark is part of the disc/disk content and is derived by imaging, converting to an electrical signal and transmitted to the comparator, therefore the arguments are not deemed persuasive.

Appealed claim 10

Claim 10 is analyzed and discussed with respect to the claims above.

(M) In re page 29, appellant states, "The signatures within Linnartz are not characteristics of the content of information on the carrying medium."

In response the examiner agrees, but, the first and second characteristic are met by medium having watermarks, embedded and physical are part of the medium, also hash values are part of the content, therefore the arguments are not deemed persuasive.

The examiner deems that all arguments with respect to all claims have been addressed and will summaries issues.

Summary

Deriving argument, not persuasive, in view of not clear if one acknowledging a narrowing scope and importing from the specification it is not clear how much detail would be proper to

import, the examiner deems amending to claim more of the details in the specification.

Transmitting argument, not persuasive, deemed met by any transfer of data from any source including the read head, MPEG decoder, physical watermark separator to comparator.

Summaries are deemed met by a subset of the content signal returned by the decoder.

Continuous met by a combination with Cox, having more than one watermark within the duration of the content, therefore, continuously extracting/deriving watermarks and transmitting back to the player comparator to determine to stop or not transmission from player to decoder.

Further, characteristics are met by anything extracted from the content wherein the comparator compares these derived characteristics to determine of the transmission to the MPEG decoder should be cut off through the switch.

For the above reasons, it is believed that the rejections should be sustained.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

Respectfully submitted,

Conferees:

Vincent Boccio (Primary Examiner of Record)

James Groody (SPE)

Thai Tran (SPE)

VINCENT BOCCIO
PRIMARY EXAMINER

THAI TRAN
PRIMARY EXAMINER

ROBERT CHEVALIER
PRIMARY EXAMINER

US Philips Corporation

Intellectual Property Department

580 White Plains Road

Tarrytown, NY 10591